

Imaging with positive T 1-contrast using superstimulated echoes

Hennig J., Il'Yasov K., Weigel M.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

This article presents the basic principles of the superstimulated echo mechanism and shows preliminary results of its application to T 1-weighted imaging with positive T 1-contrast. A superstimulated echo scheme uses a preparation of square-wave modulated, periodically inverted z-magnetization, which after signal evolution during the mixing time T_M is fully converted into transverse magnetization. This avoids the 50% signal loss of a conventional stimulated echo. Furthermore, its implementation as a preparation module for standard turbo spin echo (TSE) imaging allows producing images with positive T 1-contrast. Magn Reson Med, 2012. © 2011 Wiley Periodicals, Inc. Copyright © 2011 Wiley Periodicals, Inc.

<http://dx.doi.org/10.1002/mrm.24111>

Keywords

diffusion imaging, positive T 1-contrast, stimulated echoes, superstimulated echoes, T 1-weighted imaging